

Amendments to the Claims:

1.-8. (canceled)

9. (currently amended) An automated method for generating program modules for controlling field devices, from a machine-readable parameterized description of field devices, wherein the description is used by a control unit for controlling the field devices, the method comprising:

providing control equipment in each of the field devices, wherein the control equipment comprises at least one microprocessor, at least one electronic storage mechanism, and data input and output mechanisms for communicating with the control unit;

wherein the field device identifies parameters of the field device in the description, identifies characteristics of the parameters relevant for control purposes, and automatically generates executable program modules for the control equipment of the field device, which can be executed by the field device's microprocessor and which are based, at least partially, on the identified parameters and/or the characteristics of the parameters which have been identified as relevant for control purposes; and

wherein the field device measures, positions, records, or regulates an industrial process.

10. (previously presented) A method in accordance with Claim 9, wherein the control equipment comprises at least one electronic storage data input and output means for communications with the control unit.

11. (previously presented) A method in accordance with Claim 9, wherein the identifying characteristics of the parameters relevant for control purposes step comprises parameters regarding a data type, size, and allowed values or allowed value range.

12. (currently amended) A method in accordance with Claim 9, wherein for at least one parameter in the description, the field device automatically generates a declaration module ~~is generated in the field device~~, which reserves for the parameter a storage segment of the at least one electronic storage mechanism, and defines a data type and size, wherein the storage segment is reserved, and the data type and the size correspond to the identified characteristics of the parameter.

13. (currently amended) A method in accordance with Claim 12, wherein for at least one parameter in the description, the field device automatically generates an access module ~~is generated in the field device~~, which regulates accesses by the control equipment to the storage segment defined for the parameter in the declaration module.

14. (currently amended) A method in accordance with Claim 13, wherein ~~for at least one parameter a cross-referencing module is generated in the field device, which~~ the access module instructs the control equipment to execute other program modules when there is an access to the parameter.

15. (previously presented) A method in accordance with Claim 13, wherein for at least one parameter an input checking module is also generated in the field device, which can be called up by the access module and which, when a parameter is changed, checks whether a new parameter value lies within a set of allowed values or within an allowed range.

16. (previously presented) A method in accordance with Claim 9, wherein an error message is generated in the field device if a parameter value supplied by the control unit does not lie within a set of allowed values or lies outside a permissible range.

17. (previously presented) A method in accordance with Claim 9, wherein for at least one parameter a naming module is also generated in the field device, which stores on the at least one electronic storage mechanism a name for the parameter, and makes it possible to access the parameter under this name.

18. (canceled).

19. (previously presented) A method in accordance with Claim 13, wherein for at least one parameter an input checking module is also generated in the field device, which can be called up by the access module and which, when a parameter is changed, checks whether a new parameter value lies within a set of allowed values or within an allowed range.

20. (previously presented) A method in accordance with Claim 14, wherein for at least one parameter an input checking module is also generated in the field device, which can be called up by the access module and which, when a parameter is changed, checks whether a new parameter value lies within a set of allowed values or within an allowed range.

21. (previously presented) A method in accordance with Claim 12, wherein an error message is generated in the field device if the parameter value supplied by the control unit does not lie within the set of allowed values or lies outside the permissible range, as applicable.

22. (previously presented) A method in accordance with Claim 13, wherein an error message is generated in the field device if the parameter value supplied by the control unit does not lie within the set of allowed values or lies outside the permissible range, as applicable.

23. (previously presented) A method in accordance with Claim 12, wherein for at least one parameter a naming module is also generated in the field device, which stores on the at least one electronic storage mechanism a name for the parameter, and makes it possible to access the parameter under this name.

24. (previously presented) A method in accordance with Claim 13, wherein for at least one parameter a naming module is also generated in the field device, which stores on the at least one electronic storage mechanism a name for the parameter, and makes it possible to access the parameter under this name.

25. (currently amended) An automated method for generating, from a machine-readable description of field devices, program modules for controlling field devices, which are used on a control unit for the purpose of controlling the field devices, where each of the field devices incorporates control equipment with a microprocessor, with a storage mechanism and with data input and output mechanisms for communicating with the control unit, the method comprising:

each field device identifying parameters of the field device comprised in the description;

for each of the parameters, the field device identifying characteristics relevant for control purposes; and

the field device automatically generating executable program modules for the control equipment of the field device, to be executed by the field device's microprocessor and which are based, at least partially, on the identified parameters and/or the characteristics of the parameters which have been identified as relevant for control purposes;

wherein the field device measures, positions, records, or regulates an industrial process.

26. (previously presented) A method in accordance with Claim 25, further comprising:
generating for at least one parameter a declaration module in the field device, which reserves for the parameter a storage segment of the storage mechanism and/or defines a data type and/or size of the parameter, wherein the storage segment is reserved, and the data type and/or the size correspond to the identified characteristics of the parameter.

27. (currently amended) A device for generating control modules for field devices, from a machine-readable parameterized description of the field devices, for use on control units for remote control of field devices, wherein each of the field devices has control equipment with at least one microprocessor, with at least one electronic storage mechanism and with data input and output mechanisms for communicating with the control units, the device comprising:

input equipment for reading in and storing the description into a field device;

a first analysis facility in the field device for identifying the parameters of the field device being in the description;

a second analysis facility in the field device for identifying the characteristics of the parameters defined in the description as relevant for control purposes; and

a generation mechanism in the field device which, for at least one of the parameters identified in the first analysis facility mechanism, generates at least one executable program module, which can be executed on the field device's microprocessor;

wherein the field device measures, positions, records, or regulates an industrial process.

28. (previously presented) A device in accordance with Claim 27, wherein the generation mechanism generates:

a declaration module in the field device which, for the parameter concerned, defines a storage segment of the at least one electronic storage mechanism, and a data type, size, and a set of allowed values or an allowed value range for the segment, and

an access module in the field device which, for the parameter concerned, controls accesses by the control equipment to the storage segment defined in the declaration module, and which instructs the control equipment to execute other program modules when it accesses the parameter.